

What is claimed is:

1. A cooling structure of an electronic equipment needing forced-air-cooling comprising:

substrate housing parts detachably housing therein one or plurality of substrate units;

an upstream side duct provided at the upstream side of air for cooling which is allowed to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling which passed from said upstream side duct through said substrate housing parts to flow;

exhaust means provided at an exhaust part for allowing said downstream side duct to open to an outside air to forcibly discharge air in said substrate housing parts to the outside air, thereby allowing the air for cooling to flow to said substrate housing parts; and

air adjusting means for adjusting the air for cooling which passes from said upstream side duct to said downstream side duct through said substrate housing parts.

2. A cooling structure of an electronic equipment according to Claim 1, wherein said air adjusting means is installed in either a first boundary part where said substrate housing parts and said downstream side duct contact each other or a second boundary part where said substrate housing parts and said upstream side duct contact each other, thereby adjusting a volume of entire air for cooling which flows to said substrate housing parts or adjusting the volume of air corresponding to said substrate units to be installed.

3. A cooling structure of an electronic equipment according to Claim 1, wherein said air adjusting means changes exhaust capacity of the exhaust means.

4. A cooling structure of an electronic equipment according to Claim 1, further comprising first and second substrate housing frame bodies which are detachably provided in said housing, and said substrate housing parts are installed in said substrate housing frame bodies.

5. A cooling structure of an electronic equipment according to Claim 1, wherein said air adjusting means sets sizes or the number of air openings through which the air for cooling passes corresponding to said substrate units.

6. A cooling structure of an electronic equipment according to Claim 1, further comprising a motor for driving said exhaust means, and control means for controlling a driving input relative to said motor to control the number of revolution.

7. A cooling structure of an electronic equipment needing forced-air-cooling comprising:

substrate housing parts detachably housing therein one or plurality of substrate units;

an upstream side duct for allowing air for cooling to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling which passed through said substrate housing parts to flow;

first exhaust means provided at a first exhaust part for allowing said downstream side duct to open to an outside air to forcibly discharge air in said substrate housing parts to the outside air, thereby allowing the air for cooling to flow to said substrate housing parts;

a housing unit detachably installed in said downstream side duct; and

second exhaust means for allowing the air for cooling to flow from said downstream side duct into said housing unit by exhausting air from a second exhaust part for allowing said housing unit to open to the outside air.

8. A cooling structure of an electronic equipment according to Claim 7, wherein said second exhaust part of said housing unit side and said downstream side duct are partitioned to have an exhaust guide for intercepting exhaust air at said housing unit side from said downstream side duct.

9. A cooling structure of an electronic equipment needing forced-air-cooling comprising:

substrate housing parts installed in a housing to

detachably house therein substrate units;

an upstream side duct provided at the upstream side of air for cooling which is allowed to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling, which passed through said substrate housing parts from said upstream side duct, to flow;

an intake part for guiding the air for cooling to said upstream side duct:

an exhaust part for exhausting the air for cooling from said downstream side duct;

exhaust means installed in said exhaust part for forcibly discharging air in said housing to an outside air to allow the air for cooling to flow to said substrate housing parts; and

air adjusting means for adjusting the air for cooling which flows from said upstream side to said downstream side duct through said substrate housing parts.

10. A cooling structure of an electronic equipment according to Claim 9, wherein said housing unit is provided with an intake part which is allowed to open to said downstream side duct, and intake fans are installed at said intake part.

11. A cooling structure of an electronic equipment needing forced-air-cooling comprising:

substrate housing parts for detachably housing therein substrate units from a wall face side of a housing;

an upstream side duct provided at the upstream side of air for cooling which is allowed to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling, which passed through said substrate housing parts from said upstream side duct, to flow;

a ventilation part provided at the wall face of said housing for allowing said upstream side duct to open to an outside air;

a first exhaust part provided at the wall face of said

housing for allowing said downstream side duct to open to the outside air;

first exhaust means provided at said first exhaust part to forcibly discharge air in said housing to the outside air to allow the air for cooling to flow to said substrate housing parts;

air adjusting means for adjusting the air for cooling which flows from said upstream side duct to said downstream side duct through said substrate housing part;

a housing unit installed on said downstream side duct for housing a circuit unit; and

second exhaust means provided in said housing unit or housing for exhausting air from said second exhaust part of said housing by allowing the air for cooling to flow to said housing unit.

12. An information processing equipment comprising:

substrate housing parts detachably housing therein one or plurality of substrate units;

an upstream side duct provided at the upstream side of air for cooling which is allowed to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling which passed from said upstream side duct through said substrate housing parts to flow;

exhaust means provided at an exhaust part for allowing said downstream side duct to open to an outside air to forcibly discharge air in said substrate housing parts to the outside air, thereby allowing the air for cooling to flow to said substrate housing parts; and

air adjusting means for adjusting the air for cooling which passes from said upstream side duct to said downstream side duct through said substrate housing parts.

13. An information processing equipment according to Claim 12, wherein said air adjusting means is installed in either a first boundary part where said substrate housing parts and said downstream side duct contact each other or a second boundary part where said substrate housing parts

and said upstream side duct contact each other, thereby adjusting a volume of entire air for cooling which flows to said substrate housing parts or adjusting the volume of air corresponding to said substrate units to be installed.

14. An information processing equipment according to Claim 12, wherein said air adjusting means changes exhaust capacity of the exhaust means.

15. An information processing equipment according to Claim 12, further comprising first and second substrate housing frame bodies which are detachably provided in said housing, and said substrate housing parts are installed in said substrate housing frame bodies.

16. An information processing equipment according to Claim 12, wherein said air adjusting means sets sizes or the number of air openings through which the air for cooling passes corresponding to said substrate units.

17. An information processing equipment according to Claim 12, further comprising a motor for driving said exhaust means, and control means for controlling a driving input relative to said motor to control the number of revolution.

18. An information processing equipment comprising:
substrate housing parts detachably housing therein one or plurality of substrate units;

an upstream side duct for allowing air for cooling to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling which passed through said substrate housing parts to flow;

first exhaust means provided at a first exhaust part for allowing said downstream side duct to open to an outside air to forcibly discharge air in said substrate housing parts to the outside air, thereby allowing the air for cooling to flow to said substrate housing parts;

a housing unit detachably installed in said downstream side duct; and

second exhaust means for allowing the air for cooling to flow from said downstream side duct into said housing unit

by exhausting air from a second exhaust part for allowing said housing unit to open to the outside air.

19. An information processing equipment according to Claim 18, wherein said second exhaust part of said housing unit side and said downstream side duct are partitioned to have an exhaust guide for intercepting exhaust air at said housing unit side from said downstream side duct.

20. An information processing equipment comprising:
substrate housing parts installed in a housing to detachably house therein substrate units;

an upstream side duct provided at the upstream side of air for cooling which is allowed to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling, which passed through said substrate housing parts from said upstream side duct, to flow;

an intake part for guiding the air for cooling to said upstream side duct:

an exhaust part for exhausting the air for cooling from said downstream side duct;

exhaust means installed in said exhaust part for forcibly discharging air in said housing to an outside air to allow the air for cooling to flow to said substrate housing parts;, and

air adjusting means for adjusting the air for cooling which flows from said upstream side to said downstream side duct through said substrate housing parts.

21. An information processing equipment according to Claim 20, wherein said housing unit is provided with an intake part which is allowed to open to said downstream side duct, and intake fans are installed at said intake part.

22. An information processing equipment comprising:
substrate housing parts for detachably housing therein substrate units from a wall face side of a housing;
an upstream side duct provided at the upstream side of air for cooling which is allowed to flow to said substrate housing parts;

a downstream side duct for allowing the air for cooling, which passed through said substrate housing parts from said upstream side duct, to flow;

a ventilation part provided at the wall face of said housing for allowing said upstream side duct to open to an outside air;

a first exhaust part provided at the wall face of said housing for allowing said downstream side duct to open to the outside air;

first exhaust means provided at said first exhaust part to forcibly discharge air in said housing to the outside air to allow the air for cooling to flow to said substrate housing parts;

air adjusting means for adjusting the air for cooling which flows from said upstream side duct to said downstream side duct through said substrate housing part;

a housing unit installed on said downstream side duct for housing a circuit unit; and

second exhaust means provided in said housing unit or housing for exhausting air from said second exhaust part of said housing by allowing the air for cooling to flow to said housing unit.